

WHAT IS CLAIMED IS:

1. Safety ski binding with a toe and a heel binding and an electronic circuit incorporating an electronic display device and sensor system for displaying at least one set safety release value of the safety ski binding, characterised in that an electronic evaluation device is provided in both the toe binding and in the heel binding, each respectively having at least one sensor for detecting at least the respective set safety release value and each of the evaluation devices respectively has a separate power supply system and transmitter and/or receiver device for operating a wireless, one-way or two-way data or signal transmission, only a single display device being provided on the toe binding or on the heel binding, in particular a display with graphic capability, for displaying the respective values or states of the toe binding or heel binding.

2. Safety ski binding as claimed in claim 1, characterised in that the evaluation device disposed in the heel binding is connected to a sensor for determining or checking a clamping pressure of a slip-on spring system of the heel binding relative to a ski shoe.

3. Safety ski binding as claimed in claim 1, characterised in that the evaluation device disposed in the heel binding is connected to at least one sensor for detecting the open and/or closed state of the heel binding.

4. Safety ski binding as claimed in claim 1, characterised in that the sensor for detecting the set safety release value is provided in the form of at least

two Hall-effect sensors, in the detection range of which a multi-pole ring magnet rotatably joined to an adjusting screw for adjusting the release values of a release mechanism is disposed.

5. Safety ski binding as claimed in claim 4, characterised in that when the adjusting screw is turned, at least one digital sensor signal is generated by Hall-effect sensors spaced at a distance apart from one another in the circumferential direction of the ring magnet and the evaluation device is designed to count or record the pulses or periods of at least one sensor signal by means of at least one counter.

6. Safety ski binding as claimed in claim 5, characterised in that, depending on the direction in which the adjusting screw is turned and hence depending on the phase position of the sensor signal of the first Hall-effect sensor relative to the sensor signal of the second Hall-effect sensor, a numerical value representing previous pulses or periods stored in a non-volatile memory system is increased or decreased by turns of the adjusting screw.

7. Safety ski binding as claimed in claim 2, characterised in that the sensor for electronically determining the clamping pressure is provided in the form of a magnetic field sensor, in particular a GMR (Giant Magneto Resistive) sensor.

8. Safety ski binding as claimed in claim 7, characterised in that the magnetic field sensor is joined to a housing of the heel binding so as to be prevented from moving and a permanent magnet or metal part is disposed on a part of the slip-on

spring system that is displaceable relative to the magnetic field sensor.

9. Safety ski binding as claimed in claim 3, characterised in that the sensor for detecting the open and closed position is provided in the form of a first Hall-effect sensor and a second Hall-effect sensor, the first Hall-effect sensor being configured to signal the open state and the second Hall-effect sensor being configured to signal the closed state.

10. Safety ski binding as claimed in claim 1, characterised in that the evaluation device is configured so as to periodically activate or deactivate the electric power supply of at least one sensor.

11. Safety ski binding as claimed in claim 1, characterised in that the evaluation device disposed in the toe binding and/or the evaluation device disposed in the heel binding is connected to a motion sensor.

12. Safety ski binding as claimed in claim 11, characterised in that the electronic evaluation device is switched off or switched to a power-saving mode if the signal status of the motion sensor remains constant for a specific period of time.

13. Safety ski binding as claimed in claim 12, characterised in that the evaluation device is configured to evaluate the signal states of the motion sensor as a priority in a sleep or power-saving mode and other functions of the evaluation device are deactivated or minimised.

14. Safety ski binding as claimed in claim 11, characterised in that the display device is switched off depending on the signals of the motion sensor and depending on a period of time which elapses without any movement being recorded by the evaluation device or the motion sensor.

15. Safety ski binding as claimed in claim 1, characterised in that the evaluation device in the toe binding is configured to switch off or switch the display device to a power-saving mode if there is a change from the closed to the open state of the heel binding.

16. Safety ski binding as claimed in claim 1, characterised in that the transmitter and/or receiver device in the toe and/or heel binding is configured to transmit data signals wirelessly and/or to receive data signals wirelessly to and from a peripheral electronic computer unit, in particular a wrist-top computer, a handheld computer, a mobile telephone or any other mobile electronic unit.